

WHAT IS CLAIMED IS:

1. A digital hearing aid for increasing recognition of a sound in an ear, the hearing aid comprising:

a body member sized and configured to be engaged to the ear;

a microphone engaged to the body member for receiving an analog signal defining the sound;

a microchip implanted within the body member for converting the analog signal from the microphone into a digital signal, the microchip being operative to reduce a frequency of the digital signal below a prescribed frequency level, the microchip further being operative to reconvert the digital signal back into the analog signal; and

a receiver engaged to the body member for delivering the analog signal below the prescribed frequency level into the ear so as to increase the recognition of the sound in the ear.

2. The hearing aid of Claim 1 further comprising an amplifier engaged to the body member for amplifying the analog signal below the prescribed frequency level.

3. The hearing aid of Claim 1 further comprising a battery engaged to the body member for providing power to the hearing aid.

4. The hearing aid of Claim 1 wherein the body member is fitted within the ear.

5. The hearing aid of Claim 1 wherein the body member is worn around the ear.

6. The hearing aid of Claim 1 wherein the microphone is operative to convert the sound into the analog signal.

7. The hearing aid of Claim 1 wherein the microchip is operative to convert the analog signal into the digital signal through digitized sound processing.

8. The hearing aid of Claim 7 wherein the microchip analyzes and filters the digital signal of the voice apart from a background noise.

9. The hearing aid of Claim 1 wherein the microchip is programmable via a software of a computer for reducing the frequency of the digital signal below the prescribed frequency level.

10. The hearing aid of Claim 1 wherein the prescribed frequency level is about 1200 hertz.

11. A method of increasing recognition of a sound in an ear with a hearing aid, the hearing aid having a microphone, a microchip and a receiver, the method comprising the steps of:

a) engaging a body member of the hearing aid to the ear;

b) receiving an analog signal defining the sound with the microphone of the hearing aid;

c) converting the analog signal from the microphone into a digital signal with the microchip of the hearing aid;

d) reducing a frequency of the digital signal below a prescribed frequency level with the microchip;

e) reconvertng the digital signal back into the analog signal with the microchip; and

f) delivering the analog signal below the prescribed frequency level into the ear with the receiver of the hearing aid so as to increase the recognition of the sound in the ear.

12. The method of Claim 11 wherein the hearing aid further comprises an amplifier, and wherein prior to step f) the method comprises the step of amplifying the analog signal below the prescribed frequency level with the amplifier.

13. The method of Claim 11 wherein the hearing aid further comprises a battery, and wherein prior to step a) the method comprises the step of providing power to the hearing aid with the battery.

14. The method of Claim 11 wherein step a) comprises fitting the body member within the ear.

15. The method of Claim 11 wherein step a) comprises wearing the body member around the ear.

16. The method of Claim 11 wherein step b) comprises converting the sound into the analog signal with the microphone.

17. The method of Claim 11 wherein step c) comprises converting the analog signal into the digital signal with the microchip through digitized sound processing.

18. The method of Claim 11 wherein step d) comprises programming the microchip via a software of a computer for reducing the frequency of the digital signal below the prescribed frequency level.

19. The method of Claim 11 wherein step d) comprises reducing the frequency of the digital signal below about 1200 hertz.

20. A hearing aid for increasing recognition of a sound in an ear, the hearing aid comprising:

- a body member sized and configured to be engaged to the ear;

- a microphone engaged to the body member for receiving the sound;

- a receiver engaged to the body member for reproducing a substituted sound in the ear; and

a control unit located externally from the body member and being in wireless communication with the microphone and the receiver thereof, the control unit being operative to receive the sound wirelessly from the microphone to process the sound into the substituted sound, the control unit further being operative to transmit the substituted sound wirelessly to the receiver for reproducing the substituted sound in the ear and increase the recognition of the sound in the ear.

21. The hearing aid of Claim 20 wherein the hearing aid is a digital hearing aid.

22. The hearing aid of Claim 20 wherein the control unit is further in communication with a hand-held electronic device having a visual screen, the visual screen being sized and configured to visually display the sound received by the microphone as a word.

23. The hearing aid of Claim 22 wherein the hand-held device is a personal digital assistant.

24. The hearing aid of Claim 22 wherein the hand-held device is a cellular phone.

25. The hearing aid of Claim 20 wherein the control unit is operative to record the sound received from the microphone.

26. The hearing aid of Claim 20 wherein the control unit comprises a sound processor for processing the sound into the substituted sound.

27. The hearing aid of Claim 20 wherein the control unit comprises a translation software for translating the sound into the substituted sound of a selected language.

28. The hearing aid of Claim 12 wherein the substituted sound has a frequency below about 1200 hertz.

29. A method of increasing recognition of a sound in an ear with a hearing aid, the method comprising the steps of:

- a) engaging a body member of the hearing aid to the ear;

- b) receiving the sound with the microphone of the hearing aid;

- c) transmitting the sound wirelessly from the microphone to the control unit of the hearing aid;

- d) processing the sound into a substituted sound with the control unit;

- e) transmitting the substituted sound wirelessly from the control unit to the receiver of the hearing aid; and

- f) reproducing the substituted sound in the ear to increase the recognition of the sound in the ear.

30. The method of Claim 29 wherein the hearing aid is a digital hearing aid.

31. The method of Claim 29 further comprising a hand-held electronic device having a visual screen, and wherein step d) comprises:

1) transmitting the sound from the control unit to the hand-held electronic device; and

2) displaying the sound visually on the visual screen of the hand-held electronic device as a word.

32. The method of Claim 31 wherein the hand-held device is a personal digital assistant.

33. The method of Claim 31 wherein the hand-held device is a cellular phone.

34. The method of Claim 29 wherein step d) comprises recording the sound received from the microphone with the control unit.

35. The method of Claim 29 wherein the control unit has a sound processor, and wherein step d) comprises processing the sound into the substituted sound with sound processor.

36. The method of Claim 29 wherein the control unit has a translation software, and wherein step d) comprises translating the sound into the substituted sound of a selected language with the translation software.

37. The method of Claim 29 wherein the substituted sound has a frequency below about 1200 hertz.